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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,415	02/14/2005	Jeremy Nicholas Ness	056222-5070	4449

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MORGAN LEWIS & BOCKIUS LLP
1111 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004

EXAMINER	
SOROUSH, ALI	

ART UNIT	PAPER NUMBER
1616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/524,415	NESS ET AL.	
	Examiner	Art Unit	
	Ali Soroush	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-57* is/are pending in the application.

4a) Of the above claim(s) *6-10 and 31-35* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,11-30 and 36-57* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

DETAILED ACTION

Election/Restrictions

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

1. First material: perfume, dental flavor, agrichemical, cosmetic ingredient, insect repellent, antimicrobial agent, and deodorant.

2. Inner surface coating: polyvinyl alcohol, styrene-butadiene latex, gelatin, gum Arabic, carboxymethyl cellulose, carboxy hydroxyethyl cellulose, hydroxyethyl cellulose, other modified celluloses, sodium alginate, chitosan, casein, pectin, modified starch, polyvinyl acetal, polyvinyl butyral, polyvinyl methyl ether/maleic anhydride, polyvinyl pyrrolidone and its copolymers (e.g. polyvinylpyrrolidone/vinyl acetate, poly(vinlypyrrolidone/dimethyaminoethyl methacrylate), poly(vinylpyrrolidone/methacrylamidopropyl trimethyl ammonium chloride)), melamine-formaldehyde, and urea-formaldehyde.

3. Outer surface coating: polyvinyl pyrrolidone, its copolymers such as polyvinylpyrrolidone-ethyl acrylate, polyvinylpyrrolidone-vinyl acrylate, polyvinylpyrrolidone methacrylate, polyvinylpyrrolidone/vinyl acetate.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

The claims are deemed to correspond to the species listed above in the following manner:

I. Claims 1-5, 11-30, and 36-57 read on the species perfume, polyvinyl alchol, and polyvinyl pyrrolidone.
II. Claims 1-4, 6, 13-29, 31, and 38-51 read on the species dental flavor, polyvinyl alcohol, and polyvinyl pyrrolidone.
III. Claims 1-4, 7, 13-29, 32, and 38-51 read on the species agrichemical, polyvinyl alcohol, and polyvinyl pyrrolidone.
IV. Claims 1-4, 8, 13-29, 33, and 38-51 read on the species cosmetic ingredient, polyvinyl alcohol, and polyvinyl pyrrolidone.
V. Claims 1-4, 9, 13-29, 34, and 38-51 read on the species insect repellent, polyvinyl alcohol, and polyvinyl pyrrolidone.
VI. Claims 1-4, 10, 13-29, 35, and 38-51 read on the species antimicrobial agent, polyvinyl alcohol, and polyvinyl pyrrolidone.
VII. Claims 1-4, 10, 13-29, 35, and 38-51 read on the species deodorant active, polyvinyl alcohol, and polyvinyl pyrrolidone.

The following claim(s) are generic: 1-4, 13-18, 21, 22, 25-29, 38-43, 46, 47, 50, and 51.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: The instant invention lacks unity because the general inventive concept is well known in the prior art. That is a capsule

having an active agent, with an inner and/or outer polymer coating has already been taught in the prior art. Leiberich et al. (US Patent 3959540, Published 05/25/1976) teaches a gelatin capsule with an inner layer of polyvinylpyrrilidone, and an outer layer of celluloseacetatephthalate usede to deliver an active pharmaceutical to a patient. (See column 2, Lines 55-59).

During a telephone conversation with Paul Kokulis on 09/12/2007 a provisional election was made with traverse to prosecute the invention of the claims that read on the species: first material: perfume, inner coating: polyvinyl pyrrolidone, and outer coating: polyvinyl alcohol, claims 1-5, 11-30, and 36-57. Affirmation of this election must be made by applicant in replying to this Office action. Claims 6-10 and 31-35 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4, 5, 11-17, 25, 26, 29, 30, 36, 37, 42, 50, 51, and 54-56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 4 and 29 recites the broad recitation "at least partially ... soluble", and the claim also recites "substantially and more preferably completely soluble" which is the narrower statement of the range/limitation. Further, claims 11, 36 and 55 recites the broad recitation "at least 80%", and the claim also recites "at least 90%" which is the narrower statement of the range/limitation. Further, claims 12, 37 and 56 recites the broad recitation "less than 35%", and the claim also recites "less than 20%" which is the narrower statement of the range/limitation. Further, claims 17 and 42 recites the broad recitation "diameter ... 1 to 500 microns", and the claim also recites "1 to 50 microns ... 1 to 10 microns" which is the narrower statement of the range/limitation. Further, claims 25 and 50 recites the broad recitation "thickness ... 0.01 to 30 microns", and the claim also recites "0.01 to 5

microns ... 0.03 to 1 micron ... 0.03 to 0.5 microns" which is the narrower statement of the range/limitation. Further, claims 26 and 51 recites the broad recitation "shell wall material to encapsulated material ... 1:10 to 3:2", and the claim also recites "1:10 to 1:2" which is the narrower statement of the range/limitation. Further, claim 54 recites the broad recitation "diameter ... 1 to 50 microns", and the claim also recites "1 to 10 microns" which is the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 2, 18-22, 28, and 43-47 rejected under 35 U.S.C. 102(b) as being anticipated by Leiberich et al. (US Patent 3959540, Published 05/25/1976).

Leiberich et al. teaches a gelatin capsule having an inner layer of polyvinylpyrrolidone and an outer layer of celluloseacetatephthalate for encapsulation of a pharmaceutical medicament so as to protect the medicament from gastric juice degredation. (See column 2, Lines 55-59 and column 1, Lines 20-21). The gelatin capsule where coated by first dissolving the film forming materials in either water or organic solvent and then layering on the capsule. (See column 2, Lines 51-54 and 60-63).

2. Claims 1-5, 13, 17, 21, 22, 27-30, 38, 42, 46, 47, and 51 rejected under 35 U.S.C. 102(b) as being anticipated by Behan et al (US Patent 5500223, Published 03/19/1996).

Behan et al. teaches the encapsulation of hydrophobic material in silica particles. (See column 2, Lines 6-8). In a preferred embodiment Behan et al. teaches the formation of silica capsule having perfume as the hydrophobic material. Wherein the capsule had size of 2-5 microns and a weight ration of silica to encapsulate of 1:7.5. (See column 4, Lines 15-35). These capsules are further treated to have a starch outer layer (See column 6, Lines 1-7). In another preferred embodiment a flavoring agent is similarly encapsulated providing a capsule size of 2-30 microns and weight ratio of silica to encapsulated material of 1:10. (See column 4, Lines 36-47). This encapsulated flavoring agent is made by a complex coacervation process with the adjustment of the pH and addiotn of gum acacia. (See column 6, Lines 45-58). The encapsulated flavor is added to a toothpaste formulation in an amount of 1 percent. (See column 7, Lines 30-48).

3. Claims 1-4, 13-15, 17-19, 26, 28, 29, 38, 39, 40, 42, 43, 44, 51, 52, 54, and 57 are rejected under 35 U.S.C. 102(b) as being anticipated by Nastke et al. (International Application Published Under the PCT WO 96/03041, Published 02/08/1996).

Natske et al. teaches the formation of spherical microencapsulates comprising biological active compounds and a polymeric capsule material and further has a wax film inner layer on the capsule wall. (See page 9, claim 1). The polymeric wall material is made of melamine-formaldehyde condensate or a urea-formaldehyde condensate.

(See page 9 and 10, claims 8, 9, and 10). The microparticles have an average diameter of 0.5 to 20 microns. (See page 9, claim 5). In one preferred embodiment a microparticle encapsulating 12.6 g of methidathion is made by mixing 1.26 g of paraffin wax, 3g of precondensate and 0.15g polyethylene with the methidathion in 60 ml of water (i.e. 1:4.2 active material to capsule material). (See page 7, paragraph 8 and page 8, paragraph 1). The methods of microencapsulation used are coacervation, interfacial polymerization or polycondensation. (See page 1, paragraph 4). The addition of an inner wax coating provides for greater long-term stability and avoidance of hydrolysis the capsule. (See page 2, paragraph 2).

4. Claims 1-5, 11-15, 17, 21-24, 26-30, 36-40, 42, and 46-56 are rejected under 35 U.S.C. 102(b) as being anticipated by Ness et al. (US Patent 6194375 B1, Published 02/27/2001).

Ness et al. teaches the formation of capsules of perfume is by polymerization reaction at the interface between the droplets and the aqueous phase and further having polyvinyl alcohol at the surface of the capsule. (See column 6, Lines 40-55). The perfume includes solvents and is in a weight ratio of 1:30 or 1:20 to 1:2 or 1:1 relative to the shell polymer. (See column 9, Lines 24-28 and 48-51). In a preferred embodiment the perfume composition taught by Ness et al. comprises 5.3% Cithrathal concentrate, 32.0 % Linalol, 30.2% Linalyl acetate, 26.5% orange oil all of which have an octanol-water coefficient between 3 and 5. (See column 24, Lines 40-45). These encapsulated perfumes where mixed in to make perfumed shampoos including 1% of the encapsulate. (See column 24, Lines 63-66).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Applicant Claims
2. Determining the scope and contents of the prior art.
3. Ascertaining the differences between the prior art and the claims at issue; and resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1-5, 11-20, 25, 27-30, 36-45, 50, 51, and 54-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ness (International Application Published Under the PCT WO 02/074430 A1, Published 09/26/2002, Filed 03/13/2002) in view of Natske et al. (International Application Published Under the PCT WO 96/03041, Published 02/08/1996).

Applicant Claims

Applicant claims an aminoplast capsule having an inner coating and/or outer coating encapsulating a perfume.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

Ness teaches a perfume being encapsulated by an aminoplast capsule formed from a mixture of melamine-formaldehyde and ethylene/maleic anhydride. (See page 2, paragraphs 3-5). The capsule is formed by the method of polymerization using an aicd catalyzed condensation reaction. (See page 3, paragraph 1). The perfumes encapsulated are to be incorporated into shampoo compositions and other aqueous surfactant-containing products. (See page 2, paragraph 1). The capsules have a typical diameter of 10 to 50 microns and a wall thickness of 0.1 to 50 microns. (See page 5, paragraph 4). A preferred perfume composition taught by Ness comprises: 5.3% citral diethyl acetal, 32.0% linalool, 30.2% linalyl acetate, 3.0% litsea cubeba oil, and 26.5% orange oil brazil all of which have an octanol-water coefficient between 3 and 5. (See page 6 paragraph 7). The perfume encapsulate is added to a hair shampoo composition 0.2% by weight. (See page 7, paragraph 8).

Ascertainment of the Difference Between Scope the Prior Art and the Claims (MPEP §2141.012)

The composition of Ness is an aminoplast capsule with a perfume composition in a surfactant containing hair shampoo. Ness however lacks a teaching of the capsule having an inner and/or outer coating. Natske et al. cures this deficiency.

Natske et al. is discussed above.

Finding of Prima Facie Obviousness Rational and Motivation (MPEP §2142-2143)

It would have been obvious to one of ordinary skill in the art to combine the teachings of Ness with Natske et al. One would have been motivated to do so because Natske et al. teaches that an inner coating of wax in an aminoplast capsule provides for greater long-term stability. Therefore one would expect that the addition of an inner wax coating to the aminoplast capsule of Ness would also be expected to provide greater stability of the encapsulated perfume in a shampoo composition. For the foregoing reasons the instant composition would have been obvious to one of ordinary skill in the art at the time of the instant invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Soroush whose telephone number is (571) 272-9925. The examiner can normally be reached on Monday through Thursday 8:30am to 5:00pm E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Johann Richter can be reached on (571) 272-0646. The fax phone number For the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ali Soroush
Patent Examiner
Art Unit: 1616

Sharmila Landau
Supervisory Patent Examiner
Technology Center 1600